Q1. (2017)

(A)

24(a)	$2x + 10 = 3x - 20$	M1	oe $180 - (2x + 10) + 3x - 20 = 180$
	$3x - 2x = 20 + 10$ or $x = 30$	M1dep	oe
	2 × their 30 + 10 or 3 × their 30 – 20 or 70	M1dep	oe
	110	A1	
	Additional Guidance		
	$x = 30$, $y = 180 - 3(30) + 20 = 110$		M1M1M1A1
	$x = 30$, $y = 180 - 3(30) - 20 = 110$ recovered missing bracket		M1M1M1A1
	$x = 30$, $y = 180 - 3(30) - 20 = 70$ not recovered		M1M1M0A0
	$2x + 10 = 3x - 20$ $3x - 2x = 20 + 10$ $x = 10$ 2 × 10 + 10 (= 30)		M1M1M1A0
	$2x + 10 = 3x - 20$ $x = 10$ 2 × 10 + 10 (= 30)		M1M0M0A0
	$y + 2x + 10 = 3x - 20 + y$		M1M0M0A0
	$w = 3x - 20$ seen or on diagram		M0M0M0A0
	$w = 2x + 10$ seen or on diagram		M0M0M0A0

(B)

24(b)	$2x + 10 = 60$ or $2x = 60 - 10$ or $2x = 50$ or $x = 25$	M1	
	3 × their 25 – 20 or 55 or 180 – 55 or 125	M1dep	oe
	(y =) 125 and bigger or (y is) 15 bigger	A1ft	oe ft their (a)
	Additional Guidance		
	Note: A complete logical explanation of the effect of lines not being parallel eg w is smaller so $2x + 10$ is smaller so x is smaller so $3x - 20$ is smaller so y is bigger		M1M1A1
	2 × 25 + 10 = 60		M1M0A0
	y is bigger ticked but no valid working		M0M0A0

Q2. (2019)

10	**Alternative method 1**		
	180 ÷ 3 or 60	M1	
	90 – their 60 or 30	M1dep	
	180 – 65 – their 30	M1dep	85 marked on *AED*
	85	A1	
	Alternative method 2		
	90 – 65 or 25	M1	
	180 – 2 × (90 – 65) or 2 × 65 or 180 – 2 × their 25 or 130	M1dep	
	(360 – (180 ÷ 3) – their 130) ÷ 2 or 170 ÷ 2	M1dep	85 marked on *AED*
	85	A1	
	Additional Guidance		
	Correct angles could be marked on diagram		
	85 on answer line with no working or angles marked on diagram		M1M1M1A1
	60, 30, 25 or 130 on answer line with no working and not marked correctly on diagram		M0
	On Alt 1, 60 with no working and incorrectly marked on diagram		M0

Q3. (2020)

Q	Answer	Mark	Comments
11	180 – 103 – 49	M1	oe
	28	A1	

Q4. (2022)

Q	Answer	Mark	Comments
18	b and c	B1	

Q5. (2023)

Q	Answer	Mark	Comments
9	Sometimes true Sometimes true Never true	B3	B1 for each
	Additional Guidance		
	Allow any unambiguous indication eg if a cross is the only indication in a row, take that as the answer		
	A row with a tick and some crosses, mark the tick		
	A row with more than one tick is B0 for that row		

Q6. (2023)

Q	Answer	Mark	Comments
11	360 ÷ 9 (= 40) and 40 × 7 = 280 or 360 ÷ 9 (= 40) and 40 × 2 (= 80) and 80 + 280 = 360 or 40 × 2 (= 80) and 40 × 7 (= 280) and 80 + 280 = 360 or 280 ÷ 7 (= 40) and 40 × 9 = 360 or 2 : 7 = 80 : 280 and 80 + 280 = 360 or 360 − 280 (= 80) and 80 : 280 = 2 : 7	B2	oe B1 360 ÷ 9 or 280 ÷ 7 or 40 oe or $\frac{2}{9}$ or $\frac{7}{9}$ or 360 − 280 or 80 oe

Additional Guidance	
80 and 280 shown on the diagram is not oe for 80 + 280 = 360	
360 ÷ 9 × 7 = 280	B2
360 ÷ 9 and 40 × 2 and 2 : 7 = 80 : 280	B2
360 ÷ 9 = 40 and 2 : 7 = 80 : 280 (40 × 2 or 40 × 7 missing)	B1
40 × 7 = 280 without 360 ÷ 9 eg 40 × 7 = 280 and 80 + 280 = 360 (360 ÷ 9 = 40 or 40 × 2 missing)	B1
80 : 280 and 80 + 280 = 360 (2 : 7 = 80 : 280 missing)	B1
360 ÷ 9 = 40 and 80 + 280 = 360 (40 × 2 or 40 × 7 missing)	B1
280 ÷ 7 = 40 and 360 − 280 = 80 (40 × 2 or 40 × 9 missing)	B1
280 ÷ 7 and 40 × 2 and 80 : 280 = 2 : 7 (80 + 280 = 360 missing)	B1
80 + 280 = 360	B1